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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,770	04/12/2006	Steven Jan Willem Van Lerberghe	NL03 1210 US1	3542
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NXP, B.V. NXP INTELLECTUAL PROPERTY & LICENSING M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER HO, HOANG QUAN TRAN	
			ART UNIT 2818	PAPER NUMBER
			NOTIFICATION DATE 10/14/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary

Application No.

10/575,770

Applicant(s)

VAN LERBERGHE ET AL.

Examiner

Hoang-Quan T. Ho

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 3, 4, 6, 8, 9, 13-16 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 7, 10-12 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Applicant's amendment to the claims, filed on June 26, 2008, is acknowledged. Entry of amendment is accepted and made of record. Currently, claims 1 – 18 are pending in light of the amendment, in which: claims 1 – 17 were amended; claim 18 were cancelled; claims 3 – 4, 6, 8 – 9, 13 – 16, and 18 were withdrawn; and no claim was added.

Applicant's amendment to the drawings, filed on June 26, 2008, is acknowledged. Entry of amendment is accepted and made of record.

Applicant's amendment to the specification, filed on June 26, 2008, is acknowledged. Entry of amendment is accepted and made of record.

Response to Arguments/Remarks

Applicant's remarks, filed on July 9, 2009 are acknowledged. Notice of non-compliant amendment dated July 2, 2009 is hereby withdrawn.

Applicant's response filed on June 26, 2008 is acknowledged and is answered as follows.

Applicant's arguments, see pg. 8, with respect to objections to the drawings have been fully considered and are persuasive. Therefore, the objections have been rendered moot.

Applicant's arguments, see pgs. 8 – 9, with respect to objections to the specifications have been fully considered and are persuasive. Therefore, the objections have been rendered moot.

Applicant's arguments, see pgs. 9 – 10, with respect to objections to the claims have been fully considered and are persuasive. Therefore, the objections have been rendered moot.

Applicant's arguments, see pgs. 10 – 11, with respect to the rejections have been fully considered but they are not persuasive in view of the following reasons.

Applicant argued that NmH Hsieh discloses at col. 7, lines 8 – 9, that the coils are intertwined. Therefore, the coils described by NmH Hsieh do not include any windings in a plane substantially parallel to the surface of the substrate and the coils would be unable to act as a two-dimensional antenna. The examiner respectfully disagrees. NmH Hsieh further describes at col. 7, lines 10 – 11: "The coils can take either the aforementioned "L" shape or the "V" shape of the inductor." To give support what "L" shape inductor, fig. 2A of NmH Hsieh shows that the coils are not intertwined, but substantially flat. Additional support may be found at col. 3, lines 15 – 17 and col. 4, lines 16 – 28. In addition, figs. 3A – 3E shows fabrication of the "L" shape inductor substantially parallel to a substrate. Support may be found at col. 3, lines 23 – 25 and cols. 5 – 6.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12 – 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what claim 12 serves purpose to. The limitations "chip" and "integrated circuit" recited in claim 12 have been established in claim 1. Therefore, claim 12 appears to be a restatement of claim 1 without further limiting the claimed invention.

Claims 13 – 15 depend from claim 12. It is to be noted that claims 13 – 15 are withdrawn from consideration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 – 2, 5, 7, 10 – 12, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nmhsieh et al. (European Patent App. Pub. No. 0 725 407 A1), hereinafter as IBM.

Regarding claim 1, figs. 2A – 3E and 7 of IBM discloses a two-dimensional antenna (see note 1 below) comprising:

a coil comprising (as seen in figs. 2A – 3E; refs. A and A' in fig. 7):

a layer of permeable material (ref. no. 40; unlabeled rectangle box enclosed by refs. A, A', B and B' in fig. 7) provided in a chip of an integrated circuit (col. 3, lines 15 – 17; col. 7, lines 5 – 6 and 13; even if chip was not explicitly disclosed for use of fig. 2A inductive element, one of ordinary skill in the art recognizes that integrated circuits are well known to be placed in chips for electronic usage for their functionality and integration with other circuitries for input/output) in a plane substantially parallel to a surface of a substrate of the chip (ref. 300 as seen in fig. 3A; see note 2 below),

a first conductor element (refs. M2 and 70; top side of refs. A and A' as seen in fig. 7) arranged at a first side of the permeable material facing away from the substrate (as seen in figs. 2A and 7),

a second conductor element (refs. M1 and 10; bottom side of refs. A and A' as seen in fig. 7) arranged at a second side of the permeable material opposite to the first side (as seen in figs. 2A and 7),

an interconnection (refs. V1 and 60; unlabeled rectangle column boxes near the ends of refs. A, A', B, and B' as seen in fig. 7) for interconnecting a first end of the first conductor element and a first end of the second conductor element (as seen in figs. 2A and 7) wherein the interconnection, the first conductor element and the second conductor element are arranged for forming a winding around the permeable material (as seen in figs. 2A and 7), the winding extending in a plane substantially perpendicular to the surface of the substrate (as seen in figs. 2A and 3A; see note 2 below).

a further coil (refs. B and B' in fig. 7) comprising a conductor (col. 7, lines 15 – 17) arranged around the layer of permeable material (col. 7, lines 8 – 9) in a plane substantially parallel to the surface (see note 2 below), wherein the layer of permeable material forms a core for both the first mentioned coil and the further coil (col. 7, lines 8 – 9).

Note 1: IBM may not disclose explicitly “a two-dimensional antenna”. However, IBM discloses at col. 1, lines 12 – 31 that such inductive component may find use in, such as in tuners for FM broadcast. It would be obvious that such inductive component as disclosed by IBM be used as an antenna so that signals for FM broadcast could be

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detected. It is widely known in the art that such inductive component functions as an antenna.

With regards to the two-dimensional aspect, it appears that applicant relies on the flatness of the coils' conductors as seen in applicant's filed drawings, excluding the vias (e.g., refs. 8a and 8b) that connects each coil's top and bottom conductors to call it two-dimensional antenna. Even though IBM may disclose, such as fig. 7 inductor component to be three-dimensional, applicant have not demonstrated how the claimed invention's structure differs from the prior art.

In addition, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In essence, apparatus claims cover what a device is, not what a device does. See M.P.E.P. § 2112.01 and § 2114. The claimed invention does not structurally define over the cited prior art.

Note 2: IBM further describes at col. 7, lines 10 – 11: "The coils can take either the aforementioned "L" shape or the "V" shape of the inductor." To give support what "L" shape inductor, fig. 2A of IBM shows that the coils are not intertwined, but substantially flat. Additional support may be found at col. 3, lines 15 – 17 and col. 4, lines 16 – 28. In addition, figs. 3A – 3E shows fabrication of the "L" shape inductor substantially parallel to a substrate. Support may be found at col. 3, lines 23 – 25 and cols. 5 – 6.

Regarding claim 2, IBM discloses a two-dimensional antenna as claimed in claim 1, IBM discloses wherein the first conductor element is part of the integrated circuit (col. 3, lines 15 – 17; as seen in figs. 2A and 7).

Regarding claim 5, IBM discloses a two-dimensional antenna as claimed in claim 1, IBM discloses wherein the second conductor element comprises a conductive track (col. 4, line 23) on the chip and is arranged between the permeable material and the substrate (as seen in figs. 2A and 7).

Regarding claim 7, IBM discloses a two-dimensional antenna as claimed in claim 1, IBM discloses wherein

a plurality of first conductor elements (refs. M2 and 70; top side of refs. A and A' as seen in fig. 7) is arranged at a first side of the permeable material facing away from the surface of the substrate (as seen in figs. 2A and 3A),

a plurality of second conductor elements (refs. M1 and 10; bottom side of refs. A and A' as seen in fig. 7) is arranged at a second side of the permeable material opposite to the first side (as seen in figs. 2A and 7), and

a plurality of interconnections (refs. V1 and 60; unlabeled rectangle column boxes near the ends of refs. A and A' as seen in fig. 7) being arranged for interconnecting the plurality of first conductor elements and the plurality of second conductor elements in a chain (as seen in figs. 2A and 7),

wherein the interconnections the first conductor elements and the second conductor elements are arranged for forming a winding around the permeable material for conducting current (i) in turns of the winding being substantially perpendicular to the surface (as seen in figs. 2A and 3A; see note 2 of claim 1).

Regarding claim 10, IBM discloses a two-dimensional antenna as claimed in claim 1, IBM discloses wherein the coil, when energized, generates a magnetic field having a direction substantially parallel with the surface (see note 1 below; see note 2 of claim 1).

Note 1: A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In essence, apparatus claims cover what a device is, not what a device does. See M.P.E.P. § 2112.01 and § 2114. In the instant case, generating a magnetic field in a direction would not result in a structural difference. Therefore, it does not distinguish from prior art.

Regarding claim 11, IBM discloses a two-dimensional antenna as claimed in claim 1, IBM discloses wherein the coil is arranged (see fig. 2A) for being most sensitive for a magnetic field component having a direction parallel with the surface (see note 1 below; see note 2 of claim 1).

Note 1: A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In essence, apparatus claims cover what a device is, not what a device does. See M.P.E.P. § 2112.01 and § 2114. In the instant case, a magnetic field having a direction would not result in a structural difference. Therefore, it does not distinguish from prior art. Furthermore, arrangement of the coil for being most sensitive would have been obvious to one of ordinary skill in the art. IBM have disclosed various inductor shapes as seen in figs. 2A, 4 and 6 – 7 showing various degrees of success of generating inductance (e.g., col. 6, line 54 to col. 7, line 4). There is no evidence indicating the coil arrangement are critical and it has been held that it is not inventive to discover the optimum or workable range of a result-effective variable within given prior art conditions by routine experimentation. See M.P.E.P. § 2144.05(II).

Regarding claim 12, IBM discloses a two-dimensional antenna as claimed in claim 1, further comprising the chip and integrated circuit (col. 3, lines 15 – 17; col. 7, lines 5 – 6 and 13; even if chip was not explicitly disclosed for use of fig. 2A inductive element, one of ordinary skill in the art recognizes that integrated circuits are well known to be placed in chips for electronic usage for their functionality and integration with other circuitries for input/output).

Regarding claim 17, IBM discloses an electronic apparatus comprising a two-dimensional antenna as claimed in claim 1 (obvious in view of col. 1, lines 12 – 31, col. 7, lines 5 – 6 and 13 – 15, and col. 8, lines 27 – 30).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang-Quan T. Ho whose telephone number is (571)272-8711. The examiner can normally be reached on Monday - Friday, 9 AM - 5 PM, EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Loke can be reached on 571-272-1657. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hoang-Quan T Ho/
Examiner, Art Unit 2818
October 5, 2009

/Andy Huynh/
Primary Examiner, Art Unit 2818